International Journal of
Fatigue
Materials Structures Components

Index to Volume 16 (1994)

No 1 1–96
No 2 97–160
No 3 161–240
No 4 241–304
No 5 305–368
No 6 369–440
No 7 441–520
No 8 521–600

Author index

Adam, T 523, 533
Adams, D O'H 385
Aly, IH 321
Amateau, MF 281
Amzallag, C 287

Bache, MR 443
Bahuaud, J 287
Bai-ping, D 315
Berkovits, A 429
Birkinshaw, M 183
Bomas, H 147
Botsis, J 134
Bowen, P 559
Brennan, FP 351
Brett, RL 559
Brillhart, M 134
Buxbaum, O 257

Carlson, RL 141
Chen, DL 485
Chen, X 221
Collins, JA 123
Crocombe, AD 469

Dahle, T 392
Daniewicz, SR 123
Derby, B 461
Durodola, JF 461

Endo, M 163
Esper, FJ 257
Evans, WJ 443

Fang, D 429

Gao, Q 221
Gathercole, N 523, 533
Gerey, JP 287
Golos, K 147, 579
Goranson, UG 43
Gu, Haicheng 417
Gustavsson, A 503

Habib, K 357
Harris, B 523, 533
Hashem, AM 321
He, Jiawen 337
Hobbs, RE 273, 453, 493
Hori, C 370
Houser, DR 123
Husain, A 357
Hyer, MW 385

Jarfall, L 67
Jen, H-HR 193

Kam, JCP 183
Kardomateas, GA 141
Kau, YS 193

Lange, JH 281
Liao, X 327
Linkewitz, T 147

Mall, S 111
Man, KC 242
Mannan, SL 202
Marci, G 409
Mayr, P 147
Melander, A 503
Moiuddin, N 479
Murakami, Y 163

Nabijou, S 453
Nian, L 315
Nicholas, T 111

Ogawa, T 331, 344, 370, 571
Ohya, K 571
Olagnon, M 306
Padmanabhan, KA 209
Pang HLJ 413
Papadopoulos, IV 377
Pernot, JJ 111
Pippan, R 579
Pluvinage, G 549
Polak, J 403

Queeney, RA 281

Radhakrishnan, VM 479
Raman, SGS 209
Rao, KBS 202
Raoof, M 273
Raooff, M 493
Reiter, H 523, 533
Robert, JL 287
Robertson, IM 216
Roebroeks, GHJJ 33
Rotem, A 266
Ruiz, C 461

Sandhya, R 202
Saxena, VK 479
Schijve, J 21
Shamoto, K 344
Shang, HM 423
Shi, HJ 549
Shibata, H 331, 370
Shin, CS 242
Smith, PA 469
Sonsino, CM 257
Sonti, N 281
Stickler, R 485
Stüwe, HP 579
Sun, XF 221
Swift, T 75

Tay, CJ 423
Tay, TE 423
Tokaji, K 331, 344, 370, 571

Vasek, A 403
Veeramani, A 202

Wang, CM 242
Wanhill, RJH 3, 99
Weiss, B 485
Wu, IC 193

Xiao, Lin 417
Xu, Kewei 337
Xu, XX 469

Yang, P 327, 567
Yang, R 397
Yap, CM 423

Zhang-Zhong, W 315
Zhou, H 327, 567
Zhou, Huijiu 337
Zhu, J 327

Keyword Index

'Brittle-ductile' facture
Polyether-etherketone, Crack growth analysis 134
304 Stainless steel
Low-cycle fatigue, Specimen geometry 202
Adhesive
Joints, Threshold 469
Adhesive bonds
Fracture toughness, mixed mode 413
Aircraft structures
Aluminium–lithium alloys, Damage tolerance 3
Durability, Damage tolerance 43
Fibre–metal laminates, Safety 33
Full-scale fatigue tests, Fibre–metal laminates 21
Algorithm for rainflow counting
Rainflow counting method, Rainflow counts 306
Aluminium alloy
Fatigue, Threshold 579
Aluminium–lithium alloys
Aircraft structures, Damage tolerance 3
Area growth rate
Complex cycle, Fatigue crack growth 397
Artificial flaws
Damage tolerance, Fighter aircraft 67
Ausrolling
Rolling-contact fatigue 281

Bending
Multiaxial fatigue, Non-proportional loading 377
Wire rope, Sheaves 453
Block loading
Carbon-fibre composites, Life prediction 533
Brittle fracture
Plastic deformation, High-strength low-alloying steel 357

Cables
Ropes, Wires 273
Carbon fibre
Composite materials, Life prediction 523
Carbon-fibre composites
Block loading, Life prediction 533
Ceramics
Monotonic tensile bending and compressive stresses, Fatigue strength 257
Closure
Fatigue threshold, Overloading 315
Complex cycle
Fatigue crack growth, Area growth rate 397
Composite laminate
Notched, Two-step spectrum loading 193
Composite materials
Carbon fibre, Life prediction 523
Compression
Defects, Thermoplastic 385
Compressive excursions
Crack closure, Variable-amplitude loading 141
Consistency
Strain life, Cyclic material behaviour 351
Crack closure
Crack propagation, Crack propagation resistance 344
Fatigue threshold, Crack propagation 485
Variable-amplitude loading, Compressive excursions 141
Crack growth
Endurance limit, Residual stress 337
Experimental technique 216
Fatigue, Flight simulation 99
Ti-24Al-11Nb, Thermomechanical cycling 111
Crack growth analysis
Polyether-etherketone, 'Brittle-ductile' fracture 134
Crack initiation
Laser speckle, Fatigue 423
Crack propagation
Crack closure, Crack propagation resistance 344
Fatigue threshold, Crack closure 485
Crack propagation resistance
Crack propagation, Crack closure 344
Crack propagation under static load
Ti turbine-disk material, Fatigue threshold 409
Cumulative fatigue
Variable-amplitude loading, Lifetime 147
Cyclic hardening
Zirconium, Fatigue 417
Cyclic hardening and softening
Slip band spacing, Shearing of γ' precipitates 209
Cyclic material behaviour
Strain life, Consistency 351

Damage tolerance
Aircraft structures, Durability 43
Aluminium–lithium alloys, Aircraft structures 3
Artificial flaws, Fighter aircraft 67
Multiple-site damage, Inspection thresholds 75
Defects
Compression, Thermoplastic 385
Diffusion coating
Titanium alloy coating, Low-carbon steel 321
Dual-phase sheet steel
Variable amplitude, Life prediction 503
Durability
Aircraft structures, Damage tolerance 43
Dwell sensitivity
Multiaxial stress, Subsurface faceting 443

Elastic–plastic analytical model
Fatigue crack propagation, Residual stress field 123
Electron beam irradiation
Fatigue crack growth, Surface treatment 479
Endurance limit
Crack growth, Residual stress 337
Experimental technique
Crack growth 216

Fatigue
Flight simulation, Crack growth 99
Laser speckle, Crack initiation 423
Metal-matrix composites, Residual stresses 461
Threshold, Aluminium alloy 579
Zirconium, Cyclic hardening 417
Fatigue analysis
Rainflow cycle counting method, Reconstruction 287
Fatigue crack growth
Complex cycle, Area growth rate 397
Electron beam irradiation, Surface treatment 479
SiC, Particulate CMCs 559
Fatigue crack propagation
Elastic–plastic analytical model, Residual stress field 123
Fatigue damage
Multiaxial fatigue, Low-cycle fatigue 221
Polcrystalline copper, Fatigue limit 403
Fatigue initiation
Fracture mechanics, Reliability 183
Fatigue life
Low-cycle fatigue, Mean stress 429
Fatigue limit
Fatigue damage, Polcrystalline copper 403
Fatigue limit prediction
Fatigue thresholds, Small cracks 163
Fatigue of laminates
Stiffness degradation, Fatigue strength 266
Fatigue strength
Ceramics, Monotonic tensile bending and compressive stresses 257
Fatigue of laminates, Stiffness degradation 266

Gas nitriding, Pure titanium 331
Gas nitriding, Titanium alloys 370
Fatigue threshold
Crack propagation, Crack closure 485
Overloading, Closure 315
Ti turbine-disk material, Crack propagation under static load 409
Fatigue thresholds
Fatigue limit prediction, Small cracks 163
Fibre–metal laminates
Aircraft structures, Full-scale fatigue tests 21
Aircraft structures, Safety 33
Fighter aircraft
Damage tolerance, Artificial flaws 67
Flight simulation
Fatigue, Crack growth 99
Fracture mechanics
Fatigue initiation, Reliability 183
Fracture toughness
Adhesive bonds, mixed mode 413
Full-scale fatigue tests
Aircraft structures, Fibre–metal laminates 21

Gas nitriding
Fatigue strength, Pure titanium 331
Fatigue strength, Titanium alloys 370

High strain rate
Low-cycle fatigue, Hysteresis loop 567
High-strength low-alloying steel
Brittle fracture, Plastic deformation 357
Hysteresis
Stress wave, Low-cycle fatigue 327
Hysteresis loop
High strain rate, Low-cycle fatigue 567

Inspection thresholds
Damage tolerance, Multiple-site damage 75

Joints
Adhesive, Threshold 469

Laser speckle
Fatigue, Crack initiation 423
Life prediction
Carbon-fibre composites, Block loading 533
Composite materials, Carbon fibre 523
Variable amplitude, Dual-phase sheet steel 503
Lifetime
Cumulative fatigue, Variable-amplitude loading 147
Long life
Spectrum loading, Welded joints 392
Low-carbon steel
Titanium alloy coating, Diffusion coating 321
Low-cycle fatigue
304 Stainless steel, Specimen geometry 202
Fatigue damage, Multiaxial fatigue 221
Fatigue life, Mean stress 429
High strain rate, Hysteresis loop 567
Stress wave, Hysteresis 327

Mean stress
Fatigue life, Low-cycle fatigue 429
Metal-matrix composites
Fatigue, Residual stresses 461
Mixed mode
Adhesive bonds, Fracture toughness 413
Monotonic tensile bending and compressive stresses
Ceramics, Fatigue strength 257
Multiaxial fatigue
Fatigue damage, Low-cycle fatigue 221
Non-proportional loading, Bending 377
Multiaxial stress
Dwell sensitivity, Subsurface faceting 443
Multiple-site damage
Damage tolerance, Inspection thresholds 75

Non-proportional loading
Multiaxial fatigue, Bending 377
Notch
Stress concentration factor, Notch-tip stress distribution 242
Notch-tip stress distribution
Notch, Stress concentration factor 242
Notched
Composite laminate, Two-step spectrum loading 193

Overloading
Fatigue threshold, Closure 315

Particulate CMCs
Fatigue crack growth, SiC 559
Plastic deformation
Brittle fracture, High-strength low-alloying steel 357
Polcrystalline copper
Fatigue damage, Fatigue limit 403
Polyether-etherketone
Crack growth analysis, 'Brittle-ductile' facture 134
Pure titanium
Fatigue strength, Gas nitriding 331
Small fatigue cracks, Crack growth 571

Rainflow counting method
Rainflow counts, Algorithm for rainflow counting 306
Rainflow counts
Rainflow counting method, Algorithm for rainflow counting 306
Rainflow cycle counting method
Reconstruction, Fatigue analysis 287
Reconstruction
Rainflow cycle counting method, Fatigue analysis 287
Reliability
Fatigue initiation, Fracture mechanics 183
Residual stress
Endurance limit, Crack growth 337
Residual stress field
Elastic–plastic analytical model, Fatigue crack propagation 123
Residual stresses
Metal-matrix composites, Fatigue 461
Rolling-contact fatigue
Ausrolling 281
Ropes
Cables, Wires 273

Safety
Fibre–metal laminates, Aircraft structures 33
Shearing of γ' precipitates
Cyclic hardening and softening, Slip band spacing 209
Sheaves
Wire rope, Bending 453
SiC
Fatigue crack growth, Particulate CMCs 559
Simulation
Thermomechanical fatigue, Stainless steel 549
Slip band spacing
Cyclic hardening and softening, Shearing of γ' precipitates 209
Small cracks
Fatigue thresholds, Fatigue limit prediction 163
Small fatigue cracks
Crack growth, Pure titanium 571
Specimen geometry
304 Stainless steel, Low-cycle fatigue 202
Spectrum loading
Long life, Welded joints 392
Stainless steel
Thermomechanical fatigue, Simulation 549
Statistics
Wire rope, Strand 493
Stiffness degradation

Fatigue of laminates, Fatigue strength 266
Strain life
Cyclic material behaviour, Consistency 351
Strand
Wire rope, Statistics 493
Stress concentration factor
Notch, Notch-tip stress distribution 242
Stress wave
Low-cycle fatigue, Hysteresis 327
Subsurface faceting
Dwell sensitivity, Multiaxial stress 443
Surface treatment
Fatigue crack growth, Electron beam irradiation 479

Thermomechanical cycling
Ti-24Al-11Nb, Crack growth 111
Thermomechanical fatigue
Simulation, Stainless steel 549
Thermoplastic
Defects, Compression 385
Threshold
Adhesive, Joints 469
Fatigue, Aluminium alloy 579
Ti turbine-disk material
Fatigue threshold, Crack propagation under static load 409
Ti-24Al-11Nb
Thermomechanical cycling, Crack growth 111
Titanium alloy coating
Diffusion coating, Low-carbon steel 321
Titanium alloys
Fatigue strength, Gas nitriding 370
Two-step spectrum loading
Composite laminate, Notched 193

Variable amplitude
Dual-phase sheet steel, Life prediction 503
Variable-amplitude loading
Crack closure, Compressive excursions 141
Cumulative fatigue, Lifetime 147

Welded joints
Spectrum loading, Long life 392
Wire rope
Bending, Sheaves 453
Strand, Statistics 493
Wires
Ropes, Cables 273

Zirconium
Fatigue, Cyclic hardening 417